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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/592,933	<b>Applicant(s)</b> GIROD ET AL.	
	<b>Examiner</b> CAL EUSTAQUIO	<b>Art Unit</b> 2612	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/26/2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. **Claims 1-41** are objected to because of the following informalities: Each claim begins with a capital letter and ends with a period. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> paragraph***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 112 that form the basis for the rejections under this section made in this Office Action: The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- a. Regarding **claims 1 and 31**, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
- b. Regarding **claim 38**, the term "certain distance" in claim 38 is a relative term which renders the claim indefinite. The term "certain distance" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention

### ***Claim Rejections - 35 USC § 103***

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-4, 31 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012.

a. **As to claim 1**, Viljoen discloses the claimed: Method for detecting a passage associated with an access door, *for example an immigration control point, a boarding gate or the entrance to a secure building* in particular in order to guarantee the passage of one person only, characterized in that the profile of the person (FIG. 4) is determined by means of a vertical row of infra-red emitting cells (DI) arranged

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at the entry to the door opposite receiving cells ([0013]) connected to a control unit (CU) which manages the sampling and the frequency of emission of the signals ([0013]);

- i. Except for the claimed: and as a function of this profile, the access door is opened or remains closed.
- ii. As to the above claim, Viljoen, [0022], discloses controller 36 providing an alarm under appropriate circumstances. Viljoen does not disclose controlling an access door.
- iii. In the same art of security systems, Risi, [0010] discloses a controller controlling the opening and closing of a doorway on the basis of detecting a security risk/situation, such as detecting contraband.
- iv. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the contraband passageway doorway system disclosed in Risi to produce a combination that opens and closes a passageway door based on the identification of detected profiles. Such a system would have an advantage of preventing passage of a potentially threatening person without having to having security personnel directly physically detaining the person.

- b. **As to claim 2**, Viljoen in view of Risi discloses the claimed: Method according to **claim 1**, characterized in that certain zones of the profile are filtered in order to mask them or to eliminate interference zones ([0034] of Viljoen: elimination of power line glitches).
- c. **As to claim 3**, Viljoen in view of Risi discloses the claimed: Method according to **claim 2**, characterized in that the profile is divided into zones which are processed separately ([0034] and FIG. 4 of Viljoen).
- d. **As to claim 4**, Viljoen in view of Risi discloses except for the claimed: Method according to **claim 2**, characterized in that each zone is characterized as a function of its dimension in order to determine whether the zone corresponds to a person, a child or an object.

Viljoen, as disclosed in [0034] and FIG. 4, discloses an ability to detect persons as well as dogs. However, Viljoen doesn't specifically disclose detecting children. Viljoen discloses a person crawling as well as a dog. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the capability of detecting a child based on the known detecting schemes set up to detect a person and a dog. If Viljoen discloses having capabilities for detecting a dog, a person, and a person crawling, Viljoen therefore suggests that a child, which is a smaller version of an adult and one who is also known for crawling, would be identifiable as a child as Viljoen.

Therefore, one of ordinary skill in the art would have known/recognized the existence of these features as alternative embodiments in Viljoen in view of Risi which would allow a user a greater breadth of identifying additional images for increased identification.

e. **As to claim 31**, the combination of Viljoen and Risi discloses the claimed: Device for detecting a passage associated with an access door, for example a boarding gate or for entry to a secure building in particular in order to guarantee the passage of one person only, characterized in that it comprises: a first detection level formed by a vertical row of active infrared emitting cells (D1) arranged opposite a vertical row of receiving cells in order to determine the profile of a person who is entering, these cells being connected to a central processing unit (CPU) which manages the sampling and the frequency of emission of the signals and means for controlling the opening of the access door or keeping it in the closed state. See rejection for **claim 1**.

f. **As to claim 37**, the combination of Viljoen and Risi discloses the claimed: Device according to **claim 31**, characterized in that it comprises a central processing unit (CPU) communicating with the different detection levels and with a memory (M) comprising an architecture of profiles, this control unit (CU) being able to compare the profiles determined by the sensors (D1, D2, D3, D4) to the profiles contained in the

memory, to control as a function of the results of this comparison the opening of the access door or keeping it in the closed state and *optionally* triggering an alarm. See rejection of **claim 1**.

6. **Claims 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012, Trajkovic, U.S. 2002/0167408 Garoutte, U.S. 20100074472 and Flickner et al, U.S. 2003/0107649.

a. **As to claim 13**, Viljoen in view of Risi discloses the method of claim 1, except for the claimed: characterized in that from the profile obtained, in particular: a person jumping, a person accompanied by a child, two people following one another very closely, a person moving forwards then backwards and moving forwards again, a child following a large trolley, a person carrying a backpack, a person carrying a child on their back are detected.

i. Viljoen discloses, in FIG. 4, a person walking, a dog walking, and a person crawling. Risi, [0031], discloses a security entrance system which detects weight of anything within the chamber. While Viljoen doesn't directly disclose a person who is jumping, Viljoen discloses at least the ability to detect profiles of a person in a horizontal position (crawling), a person in a vertical position (walking), and a dog walking. One of ordinary skill in the art would have known/recognized that an additional feature of transitioning



from a shorter profile to a taller profile accompanied by the detection of a changing weight in a chamber would have at least indicia of a person performing a jumping-like routine in a system such as taught by Viljoen and Risi. Such a system would have the advantage of detecting sudden movements or other strange behaviors which may indicate problematic passengers which may need investigation by security personnel.

ii. As to the claimed: the profile obtained that includes: a person accompanied by a child, two people following one another very closely, a person moving forwards then backwards and moving forwards again, Viljoen, as disclosed earlier, includes profiles of a person in a horizontal position (crawling), a person in a vertical position (walking), and a dog walking. Viljoen also discloses in FIG. 4, the profile of a car. Viljoen doesn't disclose a person accompanied by a child, two people following one another very closely, a person moving forwards then backwards and moving forwards again. In the same art of personnel monitoring and detection systems, Trajkovic, FIG. 4 and 5, and [0029] discloses the detection and tracking of personnel moving in two different directions. The above figures also show persons walking closely together. It would have been obvious to one of ordinary skill in the

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art at the time of the claimed invention to include into Viljoen the personnel detection and tracking system disclosed in Trajkovic to produce a system that includes the capability of detecting the movements of persons and their collocation to other individuals as well as the ability to identify the individuals in the detected profiles. Since Viljoen discloses an ability to discern a walking person from a crawling person and a walking dog, one of ordinary skill in the art would have recognized that there is a likelihood that Viljoen has the capability to identify a child compare to an adult based on the size of the other profiles given in the reference. Furthermore, Trajkovic discloses the ability to detecting the movements of individuals. Hence, one of ordinary skill in the art would have recognized that using this feature of Trajkovic, one could conceivably detect a person moving backwards and then forwards, as well as personnel following closely to one another. Such a combination would allow security personnel added capabilities of determining likely sources of potential threats (since children, or parents accompanying children would presumably pose the least threats), and if there is a hostage situation or a possible criminal enterprise involving at least two or more personnel in close association with each other.

iii. As to the claimed: the profile obtained that includes a child following a large trolley, Viljoen, as disclosed earlier, includes profiles of a person in a horizontal position (crawling), a person in a vertical position (walking), and a dog walking. Viljoen also discloses in FIG. 4, the profile of a car. Viljoen doesn't disclose including profiles of a child following a large trolley.

In the same art of security detection and identification, Flickner, FIG. 3b, discloses a shopping card 119 and group of people 118 in the same frame as the shopping cart. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen and Risi the detection and imaging system disclosed in Flickner to produce a system that includes personnel collocated next to a shopping cart. Although the claimed limitations disclose a "trolley," one of ordinary skill in the art would have understood both terms are interchangeable. Furthermore, if Viljoen could discern between a walking person, a crawling person, and an animal, one of ordinary skill in the art would have understood that Viljoen, Risi and Flickner could also include the profile of a child. Such a combination would allow security personnel to concentrate resources on monitoring the most likely

sources of contraband and criminal activity, which is in a trolley, rather than on a child.

iv. As to the claimed: the profile obtained that includes a person carrying a child on their back are detected, and, a person carrying a backpack, Viljoen, as disclosed earlier, includes profiles of a person in a horizontal position (crawling), a person in a vertical position (walking), and a dog walking. Viljoen also discloses in FIG. 4, the profile of a car. Viljoen doesn't disclose including profiles of a person carrying a child on their back, or a person carrying a backpack. In the same art of security detection and identification, Garoutte, FIG. 1, FIG. 2, FIG. 11, [0027], and [0181-183] discloses a security imaging system. The figures suggest that Garoutte has the ability to identify persons with luggage. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen a profile identification system that includes the ability to identify persons with baggage. If Viljoen can discern between different profiles of personnel, which was found to be obvious in also detecting the profile of a child, and Garoutte's embodiment of identifying a person with luggage, it would have been therefore obvious that the above combination would also have the ability to distinguish personnel carrying children, as in the

claimed "piggybacked child" limitation, and a person who is carrying luggage, as claimed in the "person carrying a backpack" limitation. Such a combination would allow security personnel to concentrate resources on monitoring the most likely sources of contraband and criminal activity, which are luggage, rather than on a child.

2. **Claims 5, 6, and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Garoutte, U.S. 20100074472.

a. **As to claim 5**, Viljoen in view of Risi discloses the claimed: Method according to **claim 2**, except for the claimed: characterized in that each zone which touches the ground... Viljoen, FIG. 4 and [0026] discloses a personnel security identifying system having the ability to identify what types of persons, objects, and animals are detected. Included in the figures are images of a man walking, a man crawling, and a dog walking, each one of which is shown in contact with the ground. Except for the claimed: in order to distinguish by the shape of the zone, a child from a trolley and a child from a satchel or a backpack.

i. In the same art of security image processing, Garoutte, FIG. 1, FIG. 2, FIG. 11, [0027], and [0181-183] discloses a security imaging

system. The above figures suggest that Garoutte has the ability to identify persons with luggage.

ii. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen and Risi the imaging system disclosed in Garoutte to produce a system that includes the ability to discern persons. As shown above, Viljoen discloses the ability to identify persons as well as dogs. Garoutte suggests that persons with luggage can also be identified.

Therefore, if Viljoen can distinguish persons from dogs while Garoutte can distinguish a person with baggage, then the resultant combination would allow for identification and discernment

b. **As to claim 6**, Viljoen discloses except for the claimed: Method according to **claim 2**, characterized in that each zone which does not touch the ground is characterized in order to distinguish a carried child from an item of luggage. Viljoen, FIG. 4 and [0026] discloses a personnel security identifying system having the ability to identify what types of persons, objects, and animals are detected.

iii. In the same art of security image processing, Garoutte, FIG. 1, FIG. 2, FIG. 11, [0027], and [0181-183] discloses a security imaging system. The above figures suggest that Garoutte has the ability to identify persons with luggage.

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iv. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen and Risi the imaging system disclosed in Garoutte to produce a system that includes the ability to discern persons. As shown above, Viljoen discloses the ability to identify persons as well as dogs. Garoutte suggests that persons with luggage can also be identified. Therefore, if Viljoen can distinguish persons from dogs while Garoutte can distinguish a person with baggage, then the resultant combination would allow for identification and discernment between persons carrying luggage, and persons carrying children. Such a system would allow security personnel to focus on persons with luggage that have a higher likelihood of carrying contraband material.

c. **As to claim 11**, the combination of Viljoen, Risi, and Garoutte discloses the claimed: Method according to **claim 3**, characterized in that after identification of a zone not touching the ground, a child or a bag is identified as a function of the volume of the zone. See rejection of **claim 6**.

2. **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Brodsky et al, U.S. 2008/0226127.

- a. **As to claim 8**, Viljoen and Risi discloses except for the claimed: Method according to **claim 1**, characterized in that the profiles are reduced to their true size. Viljoen, as disclosed in FIG. 4 and [0026], shows detected figures reduced to a set of graphical images that show a likelihood of what the graphical images represent. Neither Viljoen nor Risi disclose reducing a figure to its true size. In the same art of personnel barrier security systems, Brodsky, [0044], discloses a personnel and object tracking system that includes the ability to classify person-objects within a given minimum height and maximum width, which suggests that the detection system in Brodsky reduces the detected object to the claimed "true height." It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen and Risi the height classification system disclosed in Brodsky to produce a security detection system includes a feature of defining detected personnel according to height. Such a system represents a known alternative embodiment to personnel detection and classification system and one of ordinary skill in the art would have known/recognized that such a feature exists and would have a likelihood of success in incorporating this known feature into a system as claimed.
- b. **As to claim 9**, Viljoen discloses except for the claimed: Method according to **claim 3**, characterized in that after dividing the profile into



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zones, the size and the volume of each zone is determined. Viljoen, while disclosing in **claim 1**, image identification, Viljoen doesn't disclose determining the size and volume of each zone. In the same art of personnel barrier security, Risi, [0031], discloses a security entrance system which detects weight of anything within the chamber. Brodsky, [0044], discloses a personnel and object tracking system that includes the ability to classify person-objects within a given minimum height and maximum width. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to discern from the weight sensing mechanism of Risi and the height and width classification scheme disclosed in Brodsky to produce a system in which the volume of a detected object can be ascertained based on detecting weight and height as disclosed in Risi and Brodsky. One of ordinary skill in the art would have known/recognized that these dimensions are interrelated and would have likely introduce such a system into the above combination to ascertain the size and weight of a potential threat detected in the system so appropriate security measures may be issued to counter the perceived threat.

2. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Flickner et al, U.S. 2003/0107649.

- a. **As to claim 10**, Viljoen and Risi discloses except for the claimed: Method according to **claim 3**, characterized in that after identification of a zone touching the ground, a trolley or bag is identified as a function of the volume of the zone. As disclosed in **claim 1**, Viljoen, [0010] and FIG. 4, discloses using a set of detectors and sensors to provide identification of persons, animals, or cars. Viljoen doesn't disclose identification of bags or trolleys. In the same art of visual identification and classification systems, Flickner, FIG. 3B and [0028], discloses a similar identification system that provides images four individuals and a shopping cart. The claimed "trolley" is taken to synonymously include shopping carts as the one disclosed. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen and Risi the identification scheme disclosed in Flickner to produce a security identification system that includes the identification of carts. Such a system would enable user to discern personnel from baggage and utilize the imaging system to single out questionable baggage noted in a security situation.
3. **Claims 7 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408.

a. **As to claim 7**, Viljoen except for the claimed: Method according to **claim 2**, characterized in that an additional filtering is carried out in order to eliminate backward movements of the person. Viljoen while disclosing a detection and identification system for personnel and objects, doesn't disclose a system that includes detecting and eliminating the backward movements of personnel. In the same art of personnel detection and monitoring, Trajkovic suggests in FIG. 5, that personnel walking in different directions are tracked going in different directions. Furthermore, [0029] and FIGS. 4 and 5 discloses that the direction and speed of individuals are detected. [0034] discloses map coloring of traffic flow of personnel traversing through a certain area. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen and Risi the cataloging, personnel tracking, and traffic mapping system disclosed in Trajkovic to produce a system that would consider the traffic movements of individuals going one direction without out consideration of the backwards movement of an individual within that traffic flow. Traffic flow is defined as a movement of a group of individuals or items traversing through a certain area. If there is flow, there is movement in a singular direction. Traffic flow considers the averaging of the mass flow of personnel going through one direction. As a result, the movements of an individual reversing course would not be heeded or

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taken into consideration with respect to the entire movement of traffic going in the opposite direction, which has the effect of filtering out that individual's course reversal. Such a system would eliminate any anomalies provided by the individual and allow a user to ascertain the general flow or direction of traffic made by the majority of personnel.

b. **As to claim 12**, Viljoen discloses the claimed: Method according to **claim 2**, characterized in that after filtering ([0034] elimination of power line glitches), except for the claimed: and before dividing into zones, the passage of several people side by side is detected. Neither Viljoen nor Risi discloses detecting several people who are side by side. In the same art of personnel detection systems, Trajkovic, FIG. 5 and [0029], discloses detecting individuals, including those who walk side-by-side. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen and Risi the multiple personnel detection system disclosed in Trajkovic to produce a system that includes the ability to detect more than one individual walking abreast. Such a system would inform security personnel that a dual threat exists and to take appropriate action to counter the same. Furthermore, although the claim discloses detecting personnel side by side "before dividing into zones." One of ordinary skill in the art would have known/recognized it would have been obvious to detect personnel

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before classifying them. Before one can classify an object, one must first detect the object.

2. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Glier, U.S. 6,760,061.

a. **As to claim 14**, Viljoen discloses except for the claimed: Method according to **claim 2**, Method according to **claim 1**, characterized in that, by means of a speed sensor (D3), the speed of passage of the person is determined and the profile created by the first detection level is modified in order to obtain a profile independent of the speed of passage. Viljoen doesn't disclose the above limitations. In the same art of detecting and tracking systems, Glier, col. 11, lines 31-52, discloses a vehicle observation and tracking system that includes an algorithm for correcting the blur made of a vehicle's motion. The algorithm corrects for the blur by bringing back the scan lines to produce an image as though the vehicle were standing still (which is the disclosed the speed of passage of the person is determined and the profile created by the first detection level is modified in order to obtain a profile independent of the speed of passage). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the known feature of a blur correcting function disclosed in Glier to produce a

detection and identification system that includes the known use of blur correction features. Such a feature renders otherwise unreadable captured images into useful images and one of ordinary skill would have recognized the usefulness of this feature and thusly would have incorporated such a feature as claimed with a likelihood of success.

2. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Glier, U.S. 6,760,061 and Petrovsky, U.S. 4,184,156.

a. **As to claim 15**, Viljoen discloses except for the claimed: Method according to claim 14, characterized in that the speed of passage is determined by means of a Doppler radar (D3). Viljoen doesn't disclose the above limitations. In the same art of identification and tracking, Petrovsky, col. 2, lines 15-22, discloses a Doppler radar for measuring speed of objects. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the Doppler radar system disclosed in Petrovsky to produce a detection system that includes the ability to measure a person's speed using Doppler radar. Doppler radar is an alternative and different variant of the infrared sensor disclosed in **claim 1** and one of ordinary skill in the art would have known/recognized that the addition of this feature would allow a security user to identify a suspect who may be in flight from the

law, as opposed to the activity of a passenger who may not display the same exigent behavior.

2. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Glier, U.S. 6,760,061 and Brodsky, U.S. 2008/0226127.

b. **As to claim 16**, Viljoen discloses except for the claimed: Method according to **claim 14**, characterized in that the speed of passage is determined by means of a distance sensor. Viljoen doesn't disclose detecting the speed of an individual traversing through its passageway using a distance sensor. In the same art of personnel and object detection systems, Brodsky, [0019-20] discloses detecting the speed of an individual traversing through its system. Detecting speed is defined as using any sensing means to measure a rate of distance traveled over a unit of time. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the speed detection system disclosed in Brodsky to produce a system that includes measuring the velocity of a person traversing through a passageway. Such a system allows a user to ascertain if the individual who may be traveling at higher than normal speeds, is a person who may be in flight from law enforcement.

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3. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Glier, U.S. 6,760,061 and Eckstein, U.S. 7,081,818.

a. **As to claim 17**, Viljoen discloses except for the claimed: Method according to **claim 14**, characterized in that the speed of passage is determined by means of successively passing through at least two infrared barriers. As disclosed in **claim 1**, Viljoen utilizes a set of infrared beams but doesn't disclose a second set of infrared beams to determine successful passage. In the same art of identification and tracking systems, Eckstein, FIG. 1 and col. 8, lines 33-45, discloses a sensing system laid along the path of an object which identifies and tracks the object along its path. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen and Risi, Trajkovic, and Glier, the scheme of placing sensors along the path of a detected and tracked object, however, using the infrared systems disclosed in Viljoen, to produce a system that monitors and tracks objects and individuals going through a passageway that would include at least two sets of sensors placed in the security passage. Such a system would have the advantage of giving the user a confirmation of detecting, identifying, and tracking information of a first set of sensors by the use of a second set



of sensors and if in case one set of sensors is defective, the second set of sensors would provide continual surveillance functions.

2. **Claims 30 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Glier, U.S. 6,760,061.

a. **As to claim 30**, Viljoen discloses except for the claimed: Method according to **claim 14**, characterized in that by means of the speed sensor (D3) a person turning back on themselves is detected. Viljoen, as disclosed earlier, includes profiles of a person in a horizontal position (crawling), a person in a vertical position (walking), and a dog walking. Viljoen also discloses in FIG. 4, the profile of a car. Viljoen doesn't disclose a person turning back on themselves is detected. In the same art of personnel monitoring and detection systems, Trajkovic, FIG. 4 and 5, and [0029] discloses the detection and tracking of personnel moving in two different directions. Also, Trajkovic, as above, discloses a system that includes the ability to determine the direction and speed of individuals. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the speed detection and direction detection system disclosed in Trajkovic to produce a combination that includes the capability of determining the speed of a suspect and the direction of travel of the suspect. Such a system would

assist security personnel in tracking suspects who are displaying characteristics of evasive behavior, such as running or walking swiftly and changing directions.

b. **As to claim 33**, the combination of Viljoen, Risi, Trajkovic, and Glier discloses the claimed: Device according to claim 30, characterized in that it comprises: a speed sensor (D3), for determining the speed of passage of the person, means for modifying the profile determined by the first detection level in order to obtain a profile independent of the speed of passage, means for comparing the profile obtained with an architecture of profiles contained in a memory. See rejection of **claim 14**.

2. **Claims 34 and 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Glier, U.S. 6,760,061 and Petrovsky, U.S. 4,184,156.

a. **As to claim 34**, Viljoen discloses except for the claimed: Device according to **claim 30**, characterized in that the speed of passage is determined by means of a Doppler radar (D3). Viljoen doesn't disclose the above limitations. In the same art of identification and tracking, Petrovsky, col. 2, lines 15-22, discloses a Doppler radar for measuring speed of objects. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the

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Doppler radar system disclosed in Petrovsky to produce a detection system that includes the ability to measure a person's speed using Doppler radar. Doppler radar is an alternative and different variant of the infrared sensor disclosed in **claim 1** and one of ordinary skill in the art would have known/recognized that the addition of this feature would allow a security user to identify a suspect who may be in flight from the law, as opposed to the activity of a passenger who may not display the same exigent behavior.

b. **As to claim 35**, the combination of Viljoen, Risi, Trajkovic, Glier, and Petrovsky discloses the claimed: Device according to **claim 33**, characterized in that the second detection level precedes the third detection level which is constituted by the speed sensor (D3). See rejection of **claim 34**.

2. **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Glier, U.S. 6,760,061 and Petrovsky, U.S. 4,184,156 and Waehner et al., U.S. 2007/0133844.

a. **As to claim 38**, Viljoen discloses except for the claimed: Device according to **claim 35**, characterized in that the radar (D3) of the third detection level is arranged at a certain distance from the entry (1) to the access door and is orientated so as to send its beam towards this entry (1).

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Viljoen, as previously disclosed, uses a set of infrared detectors to determine the presence and identity of a subject brought before its security system. Viljoen doesn't disclose any particular configuration in which the security system is set up that meets the limitations. In the same art of electronic security systems, Waehner, FIG. 1, FIG. 10, and [0056] discloses a similar security system in which a sensing system, a camera, is mounted on a post facing a subject entering through a portal. The camera is posted between a range of 1 to 25 feet. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the configuration of the camera detection post disclosed in Waehner and replace the camera system with the radar detection system of Petrovsky to produce a security detection system that includes the capability of ascertaining the speed of a person using radar situated a particular distance. Such a system would act to improve not only the detection and identification of the individual going through the portal but also ascertain how fast the individual may be going through the portal, the addition of this feature would allow a security user to identify a suspect who may be in flight from the law, as opposed to the activity of a passenger who may not display the same exigent behavior.

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2. **Claims 18, 32, 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Burley, U.S. 5,001,558.

a. **As to claim 18**, the combination of Viljoen and Risi discloses except for the claimed: Method according to **claim 1**, characterized in that the presence of a cold body is detected by means of a second detection level formed by at least one passive infrared cell (D2). In the same art of thermal detection, Burley, col. 2, lines 64-68, discloses the use of an infrared sensing system that has the ability to discern cold objects from warm objects. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen and Risi the infrared detection system disclosed in Burley to produce a system that includes detection of a cold object. As disclosed in Burley, such a system is not new in the art and a user would have the added advantage of having an increase spectrum of thermal images to observe that includes objects of interest other than warm blooded individuals.

b. **As to claim 32**, the combination of Viljoen, Risi, and Burley discloses the claimed: Device according to **claim 31**, characterized in that it comprises a second detection level formed by a passive infrared cell (D2), for detecting the presence of a cold body. See rejection of **claim 18**.

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**c. As to claim 39**, Viljoen discloses the claimed: Device according to **claim 32**, characterized in that the passive infrared cells (D2) of the second detection level comprise at least two cells arranged one above the other at the entry (1) and orientated so as to send their beam transversely to the passage. See FIG. 1.

**i.** Except for the claimed: to the door.

**ii.** Viljoen doesn't disclose providing a door through which the claimed infrared sensors are placed. In the same art of security systems, Risi, FIG.1 and [0009] discloses a door used regulate passage of personnel.

**iii.** It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the doorway system disclosed in Risi to have a personnel passage security system that includes a doorway. The infrared detection system disclosed in Viljoen is an alternative embodiment of the detection system disclosed in Risi. One of ordinary skill in the art would have known/recognized that such features would be alternative embodiments usable in the above combination and would have created the combination as claimed with a likelihood of success.

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3. **Claims 19, 20, 21, and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Burley, U.S. 5,001,558 and Trajkovic, U.S. 2002/0167408.

a. **As to claim 19**, the combination of Viljoen, Risi, and Burley discloses except for the claimed: Method according to **claim 18**, characterized in that the second detection level precedes a third detection level which is constituted by the movement direction sensor (D3). Neither Viljoen, Risi, nor Burley discloses a detection level that includes a movement direction sensor. In the same art of physical security passageway systems, Trajkovic, [0029], discloses a system that includes the ability to determine the direction and speed of individuals. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen, Risi, and Burley, the directional sensing system disclosed in Trajkovic to produce a system that includes detecting the direction of travel as well as the speed of an individual. Such a system would allow security forces which direction a potential miscreant might go and intercept the individual accordingly.

b. **As to claim 20**, the combination of Viljoen, Risi, Burley, and Trajkovic discloses for the claimed: Method according to **claim 19**, characterized in that the third detection level precedes a fourth detection level which is constituted by the speed sensor (D3). See rejection of **claim 19**.

c. **As to claim 21**, the combination of Viljoen, Risi, Burley, discloses except for the claimed: Method according to **claim 20**, characterized in that, by means of a fifth detection level (D4) the simultaneous passage of two people is detected. Neither Viljoen, Risi, Burley, discloses the above limitations. In the same art of personnel detection systems, Trajkovic, FIG. 5 and [0029] discloses detecting two personnel traversing abreast. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen, Risi, and Burley, the simultaneous personnel detection scheme disclosed in Trajkovic to produce a personnel detection system that includes the ability to detection of simultaneous individuals. Such a system would allow security personnel users to determine if more than one threat appears in a secured passageway.

d. **As to claim 28**, Viljoen except for the claimed: Method according to **claim 21**, characterized in that the detection is carried out by two crossed series of level 1 sensors. Viljoen, as in **claim 1**, discloses the use of infrared sensors in its detection and security classification system. However, Viljoen doesn't disclose the sensors set at a crossed configuration. . In the same art of detection and tracking systems, Trajkovic, FIG. 10 and [0029] discloses cameras disposed in a cross-pattern. It would have been obvious to one of ordinary skill in the art at the time of



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the claimed invention to include into the infrared detection scheme disclosed in Viljoen the cross-pattern camera-sensor positioning scheme disclosed in Trajkovic to produce a system that uses cross-patterns of infrared detection devices. Such a system, as disclosed in Trajkovic, [0029], allows the use of multiple cameras or sensors with overlapping fields of view. Using known image processing techniques, the heights of the heads of individuals may be obtained. Using this information, non-human objects moving through a scene or left behind may be better distinguished from visitors reducing errors in counting or observation.

4. **Claims 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Burley, U.S. 5,001,558 and Trajkovic, U.S. 2002/0167408 and Inaba, U.S. 2002/0030594.

a. **As to claim 29**, Viljoen discloses except for the claimed: Method according to **claim 21**, characterized in that the detection is carried out by a capacitive measurement system sensitive to the dielectric characteristics of the human body. Viljoen discloses the use of infrared sensors to detect and classify personnel. Viljoen doesn't disclose the use of capacitance measurement devices to detect personnel. In the same art of security systems, Inaba, [0008] discloses the use of human body-detecting capacitance-type sensors in a security system to detect the presence of a human-being. It would have been obvious to one of

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ordinary skill in the art at the time of the claimed invention to include into Viljoen, Risi, Burley, and Trajkovic the body capacitance detection system disclosed in Inaba to produce a security detection system that includes the uses of capacitive measurement devices to detect the presence of personnel. Inaba discloses an alternative embodiment of a type of detection sensor which can be used along with or in substitution to the infrared detectors disclosed in Viljoen. One of ordinary skill in the art would have known of such a feature and would have likely produced the above sensing system that includes the human capacitance sensor with a likelihood of success.

2. **Claims 22 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Burley, U.S. 5,001,558 and Trajkovic, U.S. 2002/0167408 and Prehn, U.S. 2003/0117280.

a. **As to claim 22**, the combination of Viljoen, Risi, Burley, and Trajkovic discloses except for the claimed: Method according to **claim 21**, characterized in that the detection is carried out by means of ultrasonic sensors (D4) arranged transversely to the passage. As disclosed in Viljoen, [0013], infrared beams are used to detect personnel traversing through the system. In the same art of security detection systems, Prehn, [0031], discloses the use of ultrasonic detectors as well as photo electric eyes and

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infrared detectors to monitor the movement of individuals in a security system. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen, Risi, Burley, and Trajkovic the alternative embodiment of using ultrasonic detectors to detect personnel as disclosed in Prehn to produce a security detection system that includes using ultrasonic detectors. As disclosed in Prehn, use of ultrasonic detectors is not new in the art and one of ordinary skill in the art would have known/recognized that such a detection scheme exists for security systems and therefore, one of ordinary skill would have had a likelihood of success incorporating this feature into the above combination found in the claimed limitations.

b. **As to claim 24**, Viljoen discloses the claimed: Method according to **claim 22**, characterized in that the detection is carried out by means of recognition of an image taken facing the passage in order to determine the profile in a plane perpendicular to the profile itself. FIG. 1 shows IR emitters and sensors across two sensing areas. As the subject passes through the area, the emitters provide a scan in a perpendicular manner to the subject as claimed.

3. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Burley, U.S. 5,001,558

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and Trajkovic, U.S. 2002/0167408 and Prehn, U.S. 2003/0117280 and Nahata, U.S. 2001/0052839.

a. **As to claim 25**, Viljoen discloses except for the claimed: Method according to **claim 22**, characterized in that the detection is carried out by means of a capacitive measurement (DMI). Viljoen, as disclosed in **claim 1**, utilizes infrared sensors to provide detection of personnel located within a security area. Viljoen doesn't disclose the use of capacitance measure to determine detection of a person. In the same art of personnel security detection system, Nahata, [0008] discloses the use of capacitance sensors to aid a security system in determining the approach of an operator going toward the detection devices. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen, Risi, Burley, Trajkovic, and Prehn, the capacitance detection system of Nahata to produce a security system that includes the use of capacitance detection systems. As disclosed in Nahata, use of capacitance detectors is not new in the art and one of ordinary skill in the art would have known/recognized that such a detection scheme exists for security systems and therefore, one of ordinary skill would have had a likelihood of success incorporating this feature into the above combination found in the claimed limitations.

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4. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Burley, U.S. 5,001,558 and Trajkovic, U.S. 2002/0167408 and Prehn, U.S. 2003/0117280 and Flickner et al, U.S. 2003/0107649.

a. **As to claim 26**, Viljoen discloses the claimed: Method according to **claim 22**, characterized in that the detection is carried out by means of distance sensors in order to detect the position of the feet in order to determine: a) if a person's legs are far apart (FIG. 4, element 48).

i. Except for the claimed: b) if a person has a trolley beside them, c) if two people are passing through side by side.

ii. As to the claimed "c) if two people are passing through side by side," Viljoen discloses detecting and identifying persons walking, but doesn't disclose two persons walking side-by-side. In the same art of personnel detection and identification systems, Trajkovic, FIG. 5 and [0029], discloses personnel detection system that includes examples of persons walking abreast.

iii. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the personnel detection system disclosed in Trajkovic to produce a system that also detects personnel walking side-by-side. Such a system would have the advantage of detecting more than one

person in a system as opposed to systems that normally screen and detect one person, which includes doubling the traffic flow through a security system.

iv. As to the claimed "b) if a person has a trolley beside them,"

Viljoen, FIG. 4, discloses detecting and providing images representing automobiles but doesn't include detection and representation of a person with a trolley beside them.

v. In the same art of personnel detection systems, Flickner, FIG. 3B and [0028], discloses a similar identification system that provides images of individuals and a shopping cart. The claimed "trolley" is taken to synonymously include shopping carts as the one disclosed and is shown in FIG. 3B next to the cart. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen and Risi the identification scheme disclosed in Flickner to produce a security identification system that includes the identification of carts. Such a system would enable user to discern personnel from baggage and utilize the imaging system to single out questionable baggage noted in a security situation.

5. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Burley, U.S. 5,001,558

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and Trajkovic, U.S. 2002/0167408 and Prehn, U.S. 2003/0117280 and Flickner et al, U.S. 2003/0107649 and Burley, U.S. 5,001,558.

- a. **As to claim 27**, Viljoen discloses except for the claimed: Method according to **claim 26**, characterized in that in order to distinguish between cases b) and c) temperature sensors are used. Viljoen discloses the use of infrared cells to perform detection and tracking of personnel and objects but Viljoen doesn't disclose using temperature sensors to distinguish between body parts and objects. In the same art of detection systems, Burley, col. 2, lines 64-68, discloses the use of an infrared sensing system that has the ability to discern cold objects from warm objects. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen and Risi the infrared detection system disclosed in Burley to produce a system that includes detection of a cold object. As disclosed in Burley, such a system is not new in the art and a user would have the added advantage of having an increase spectrum of thermal images to observe that includes objects of interest other than warm blooded individuals.
6. **Claims 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Burley, U.S. 5,001,558 and Trajkovic, U.S. 2002/0167408 and Prehn, U.S. 2003/0117280 and Denimarck, U.S. 2003/0018522.

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- a. **As to claim 23**, Viljoen discloses except for the claimed: Method according to **claim 22**, characterized in that the detection is carried out by means of a laser cooperating with a rotating mirror in order to determine the profile in a plane perpendicular to the profile itself. As previously disclosed in **claim 1**, Viljoen discloses detecting objects using infrared detection. However, Viljoen, Risi, Burley, nor Trajkovic discloses using a means of detection using a rotating mirror and laser. In the same art of security systems, Denimarck, [0063], discloses the use of a rotating mirror and laser beam system to identify a person. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen, Risi, Burley, and Trajkovic, the rotating mirror and laser detection system disclosed in Denimarck to produce a personnel detection system that includes the use of rotating mirror/laser systems. Such a system, as disclosed in Denimarck, is an alternative embodiment of a personnel detection system and one of ordinary skill in the art would have been able to include such an implementation into the above combination as claimed in the invention with a likelihood of success.
7. **Claim 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Prehn, U.S. 2003/0117280.



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a. **As to claim 36**, Viljoen discloses except for the claimed: Device according to **claim 31**, characterized in that it comprises a detection level for detecting the simultaneous passage of two people, comprising ultrasonic sensors (D4) arranged transversely to the passage.

i. As disclosed in Viljoen, [0013], infrared beams are used to detect personnel traversing through the system. In the same art of security detection systems, Prehn, [0031], discloses the use of ultrasonic detectors as well as photo electric eyes and infrared detectors to monitor the movement of individuals in a security system. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen, Risi, Burley, and Trajkovic the alternative embodiment of using ultrasonic detectors to detect personnel as disclosed in Prehn to produce a security detection system that includes using ultrasonic detectors. As disclosed in Prehn, use of ultrasonic detectors is not new in the art and one of ordinary skill in the art would have known/recognized that such a detection scheme exists for security systems and therefore, one of ordinary skill would have had a likelihood of success incorporating this feature into the above combination found in the claimed limitations.

ii. As to the claimed "detecting the simultaneous passage of two people," neither Viljoen nor Risi disclose the above limitations. In the same art of personnel detection systems, Trajkovic, FIG. 5 and [0029] discloses detecting two personnel traversing abreast. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into the combination of Viljoen, Risi, and Burley, the simultaneous personnel detection scheme disclosed in Trajkovic to produce a personnel detection system that includes the ability to detection of simultaneous individuals. Such a system would allow security personnel users to determine if more than one threat appears in a secured passageway.

8. **Claim 40** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Trajkovic, U.S. 2002/0167408 and Prehn, U.S. 2003/0117280 and Flickner et al, U.S. 2003/0107649.

a. **As to claim 40**, Viljoen discloses except for the claimed: Device according to **claim 36**, characterized in that the sensors for the detection level of the simultaneous passage of several people comprise at least three ultrasonic sensors (D4) arranged at the upper part of the entry (1) to the access door and orientated so as to diffuse their beam downwards. Viljoen, as previously disclosed, describes a security passage identification system that includes the use of infrared detectors displaced across from

each other to perform detecting and classification duties. Prehn, [0031], discloses the use of ultrasonic detectors as well as photo electric eyes and infrared detectors to monitor the movement of individuals in a security system. However, neither discloses the use of ultrasonic detectors detecting simultaneous passage of personnel walking abreast by using ultrasonic detectors placed overhead. Trajkovic, FIG. 10, discloses the use of overhead detectors providing the detection and tracking of personnel below, but does not include the use of at least three sensors performing the task. In the same art of personnel detection and classification systems, Flickner, FIG. 1, discloses a detection and tracking system that includes the use of at least three overhead cameras to track and detect the people below. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the overhead camera detection system disclosed in Flickner and replace the cameras with the ultrasound detectors disclosed in Prehn to produce a combination that would include the use of at least three ultrasonic detectors affixed overhead to provide detection and tracking system that utilizes the above limitations as claimed. Prehn provides an alternative embodiment of sensor choices while Flickner discloses the use of at least three overhead sensors as an alternative position embodiment. Such a

system would increase a user's flexibility in the use different sensors to provide a broader spectrum of detection capabilities.

9. **Claim 41** is rejected under 35 U.S.C. 103(a) as being unpatentable over Viljoen, EP 0559357 in view of Risi, U.S. 2002/0154012 and Eckstein, U.S. 7,081,818.

a. **As to claim 41**, Viljoen except for the claimed: Device according to **claim 31**, in which the access door is bidirectional, characterized in that the entry (1) to and the exit (2) from the door each comprise a group of sensors (D1, D2, D3, D4) having identical functions. Viljoen, while disclosing a security monitoring system equipped with a set of sensors, as disclosed in **claim 1**, Viljoen doesn't disclose the monitoring system including an access door that is bidirectional.

i. In the same art of personnel security systems, Risi, in the Abstract and FIG. 4, discloses a security portal that allows passage through its system in both directions. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen the bidirectional door system disclosed in Risi to produce a personnel security system that has bidirectional doors. Such a system, as disclosed in Risi, would allow a traveler or other approved item through the system but would disallow unapproved personnel or items which would before forced back through the entrance.

ii. As to the claimed a group of sensors having identical functions, Viljoen discloses at least one set of sensors in FIG. 1 providing detecting and identifying functions to the system. However, neither Viljoen nor Risi disclose this feature. In the same art of identification and tracking systems, Eckstein, FIG. 1 and col. 8, lines 33-45, discloses a sensing system laid along the path of an object which identifies and tracks the object along its path. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Viljoen and Risi the scheme of placing sensors along the path of a detected and tracked object, however, using the infrared systems disclosed in Viljoen, to produce a system that monitors and tracks objects and individuals going through a passageway that would include sensors placed in the entrance and exit points of the passageway. Such a system would have the advantage of giving the user redundant detecting, identifying, and tracking information and if in case one set of sensors is defective, the second set of sensors would provide continual protective functions.

### **Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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a. Kelliher et al., U.S. 2005/0068165 A1, FIG. 1, FIG. 2,

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Lee can be reached on (571) 272-2963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/C. E./

Examiner, Art Unit 2612

/BENJAMIN C. LEE/

Supervisory Patent Examiner, Art Unit 2612